## What is claimed is:

- 1. A control method of a voltage source inverter of a PWM system, which includes a power semiconductor device controlling a level of a voltage, a frequency and a phased, the control method comprises the steps of:
- before operation, storing voltage error information for each polarity of respective phase currents of the inverter; and

during the operation, reading the voltage error information to compensate for a voltage instruction value or a pulse width of a PWM instruction signal, in order to correct a voltage error.

- 2. The control method according to claim 1, further comprising the steps of:
- 15 before the operation,

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providing an AC motor with a current voltage instruction to drive the AC motor in a phase where current values of two phases of the power semiconductor device constituting the voltage source inverter are equal and where a current value of the other one phase is 0;

modifying a voltage correction value so that the current values of the two phases are equal or the current value of one phase is 0; and

calculating the voltage error information used during the operation based on the modified voltage correction value, to store the voltage error information.

5 3. The control method according to claim 1, further comprising the steps:

before the operation,

providing an AC motor with a current voltage instruction to drive the AC motor in a phase where current values of two phases of the power semiconductor device constituting the voltage source inverter are equal and where a current value of the other one phase is a total of the current values of the two phases;

modifying a voltage correction value so that the current values of the two phases are equal or two times a current in the other phase flows in one phase; and

calculating the voltage error information used during the operation based on the modified voltage correction value, to store the voltage error information.

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4. The control method according to claim 1, further comprising the steps:

before the operation,

providing an AC motor with a current voltage 25 instruction to drive the AC motor in a phase where currents in respective phases of the power semiconductor device constituting the voltage source inverter fall under a predetermined condition;

modifying a voltage correction value so that current values fall under the predetermined condition; and

calculating the voltage error information used during the operation based on the modified voltage correction value, to store the voltage error information.

## 10 5. The control method according to claim 1,

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wherein any one of the conditions and methods according to one of claims 2 to 4 is performed multiple times in different phases, and the voltage error information used during the operation is calculated and stored.